



# NOAA Satellite and Information Service

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NOAA Satellite and Information Service



The background of the slide is a composite of satellite imagery of Earth. At the top, a thin horizontal strip shows a view of the Earth's surface from space. Below this, the main background consists of two large, overlapping satellite images of the Earth. The left image shows a view of the Western Hemisphere, including North and South America, with swirling cloud patterns. The right image shows a view of the Eastern Hemisphere, including Africa, Europe, and Asia, also with prominent cloud formations. The text is overlaid on the left image.

# NESDIS Mission

**Our mission is to deliver accurate, timely, and reliable satellite observations and integrated products and to provide long-term stewardship for global environmental data in support of the NOAA mission.**



# Supporting NOAA's Mission

*NOAA is a science-based services agency engaged with the entire Earth system science enterprise.*

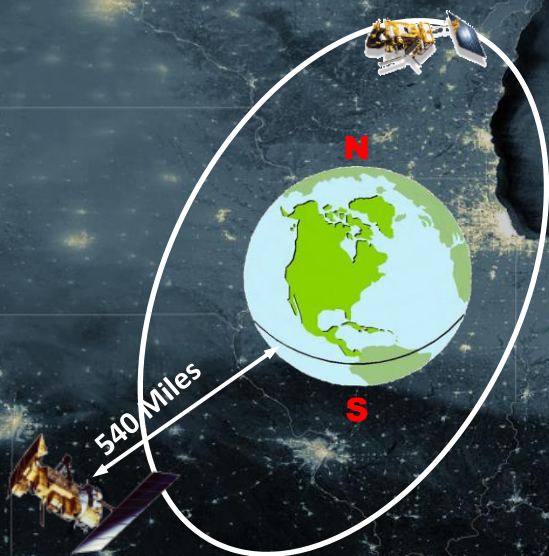
## **NOAA's Top Four Priorities:**

1. To provide information and services to make communities more resilient
2. To evolve the National Weather Service
3. To invest in observational infrastructure
4. To achieve organizational excellence

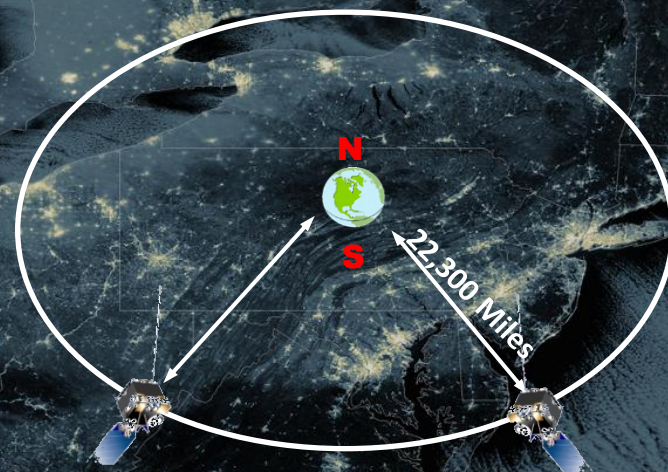


# Two Orbits, One Mission

**Polar-orbiting Operational  
Environmental Satellites (POES)  
Followed by S-NPP and JPSS-1 thru -4**



**Geostationary Operational  
Environmental Satellites (GOES),  
Through GOES-U**

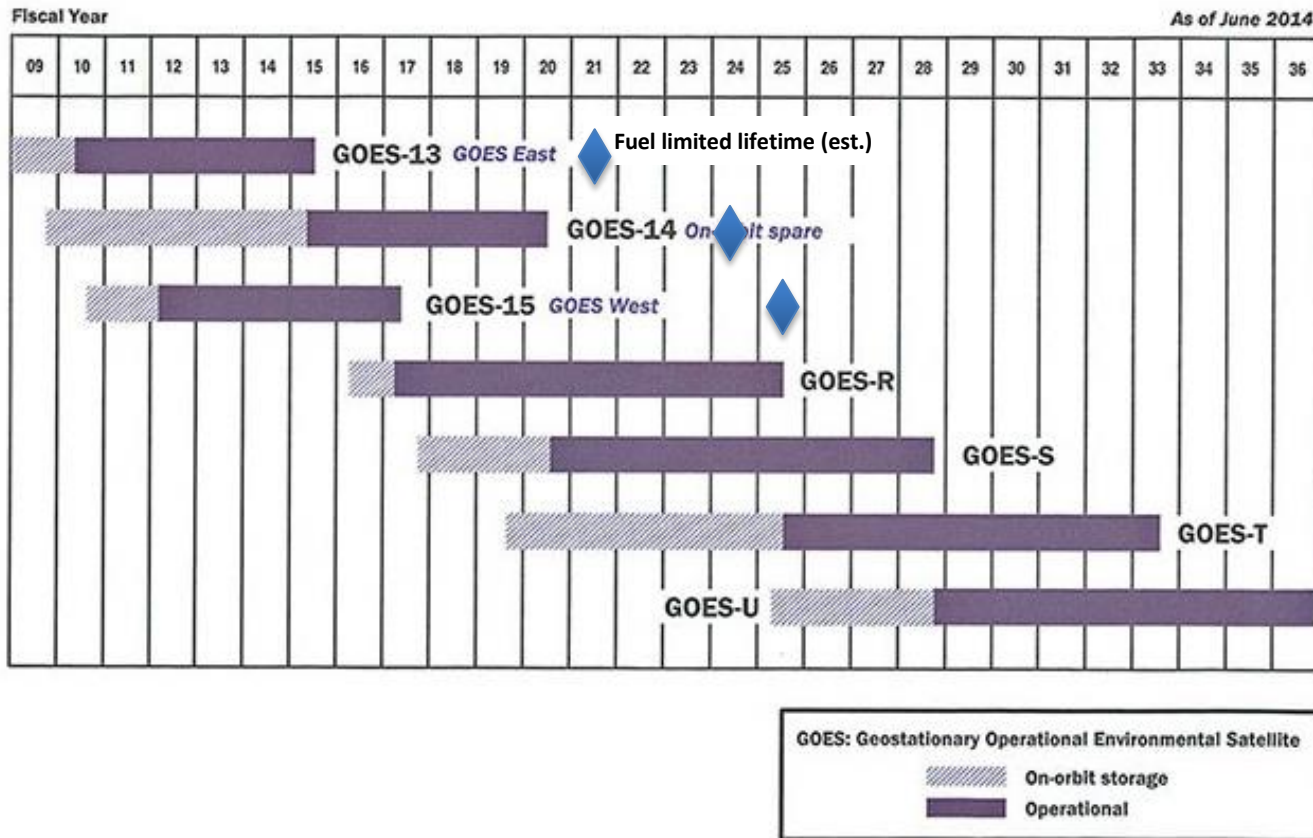




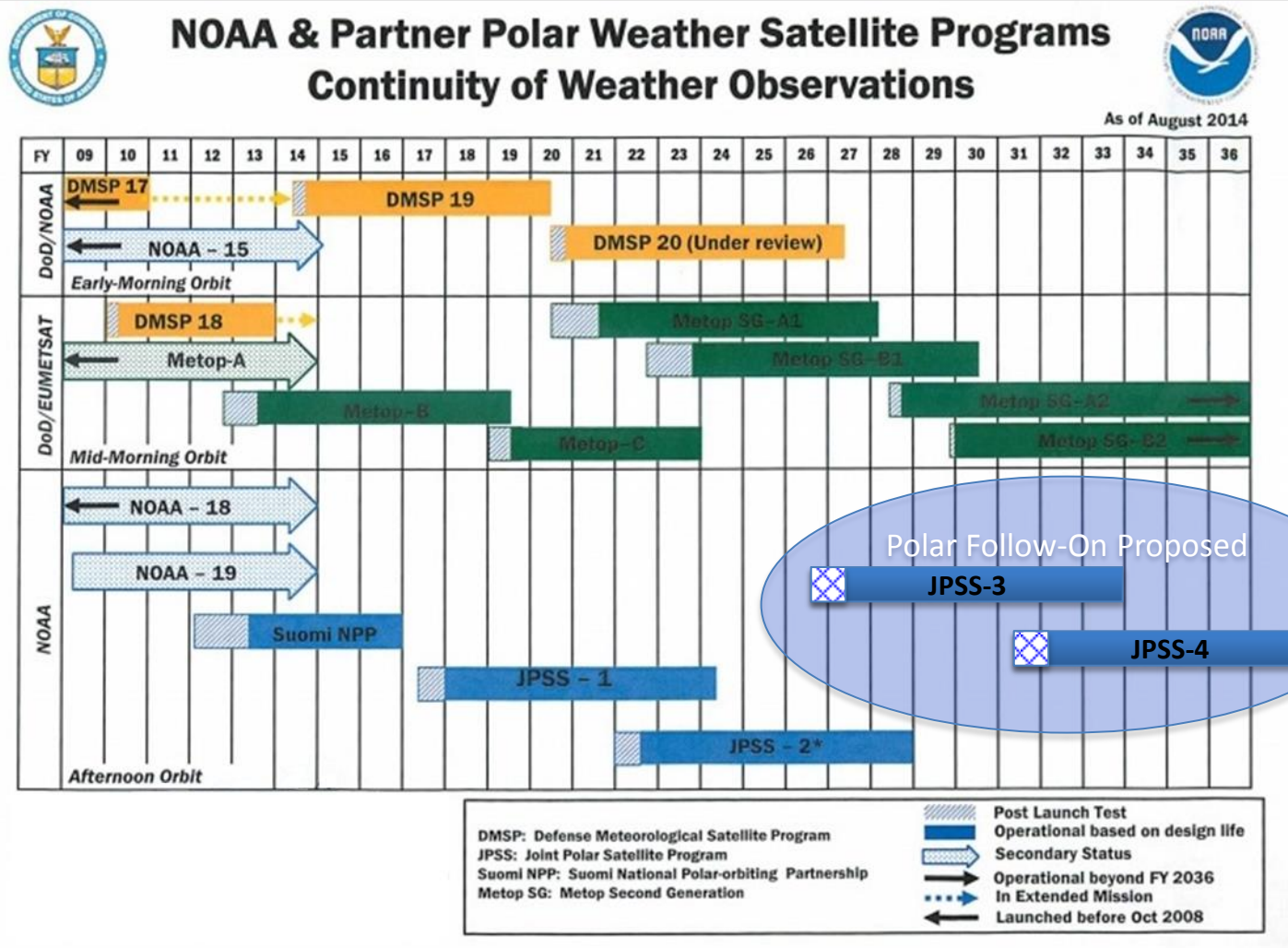
# GOES Flyout Chart



## Continuity of GOES Mission



# Polar Flyout Chart



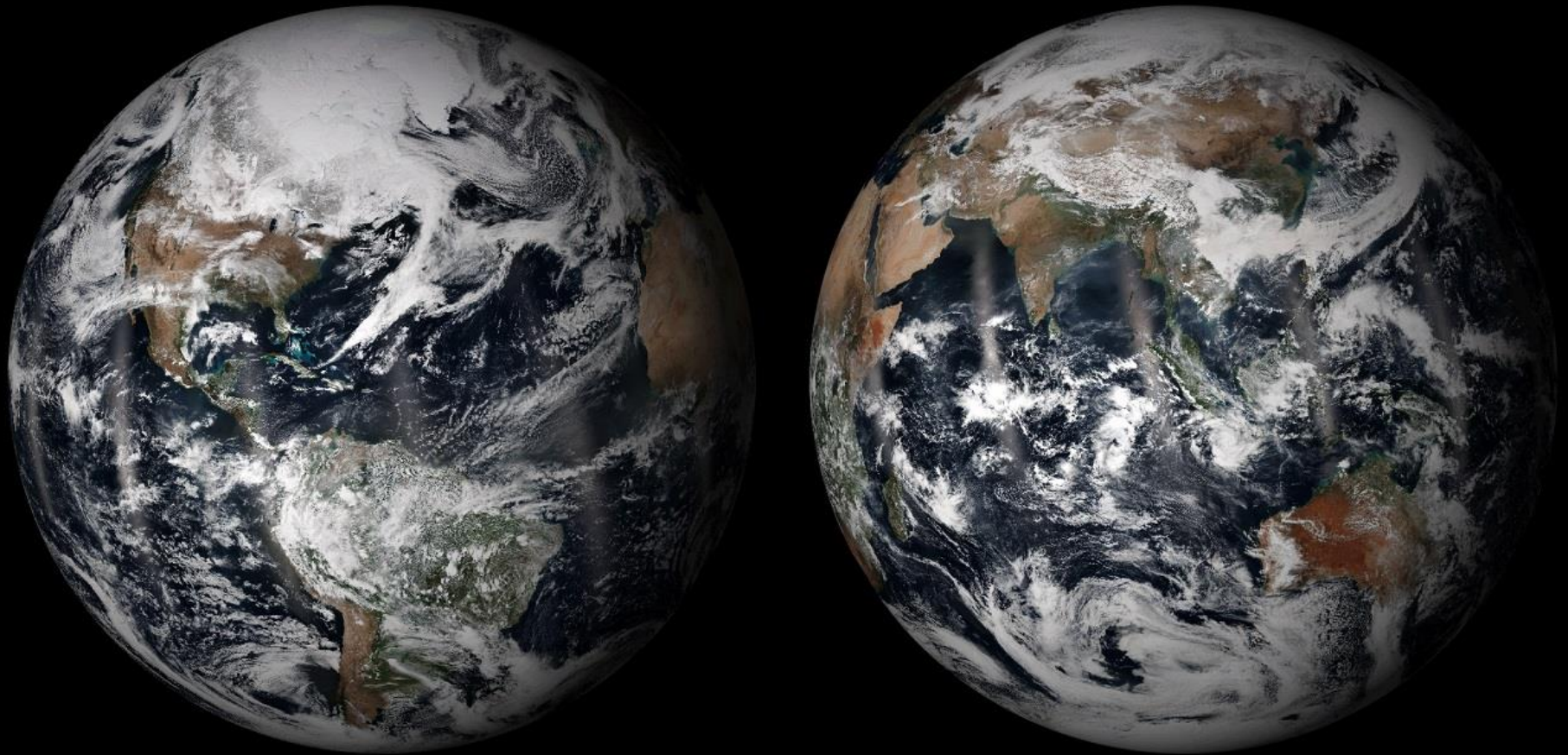


# NOAA's Established LEO and GEO Platforms

- From Low Earth Orbit
  - The five (5) satellite combination of JPSS + Polar Follow-On (PFO) will establish NOAA's LEO coverage in the afternoon orbit well into the 2030s
  - Cooperative agreements with EUMETSAT and DMSP (near term) establishes the global polar constellation
- From Geostationary Orbit
  - The GOES-R through -U series, following on the GOES-N/O/P series, provides the US continental coverage well into the 2030s
  - Cooperative agreements with EUMETSAT and JMA establishes the global geostationary constellation
- Together, these platforms have and will form the backbone of our observing network for the coming decades
  - To which we will add measurements from other sources to improve our NWP performance

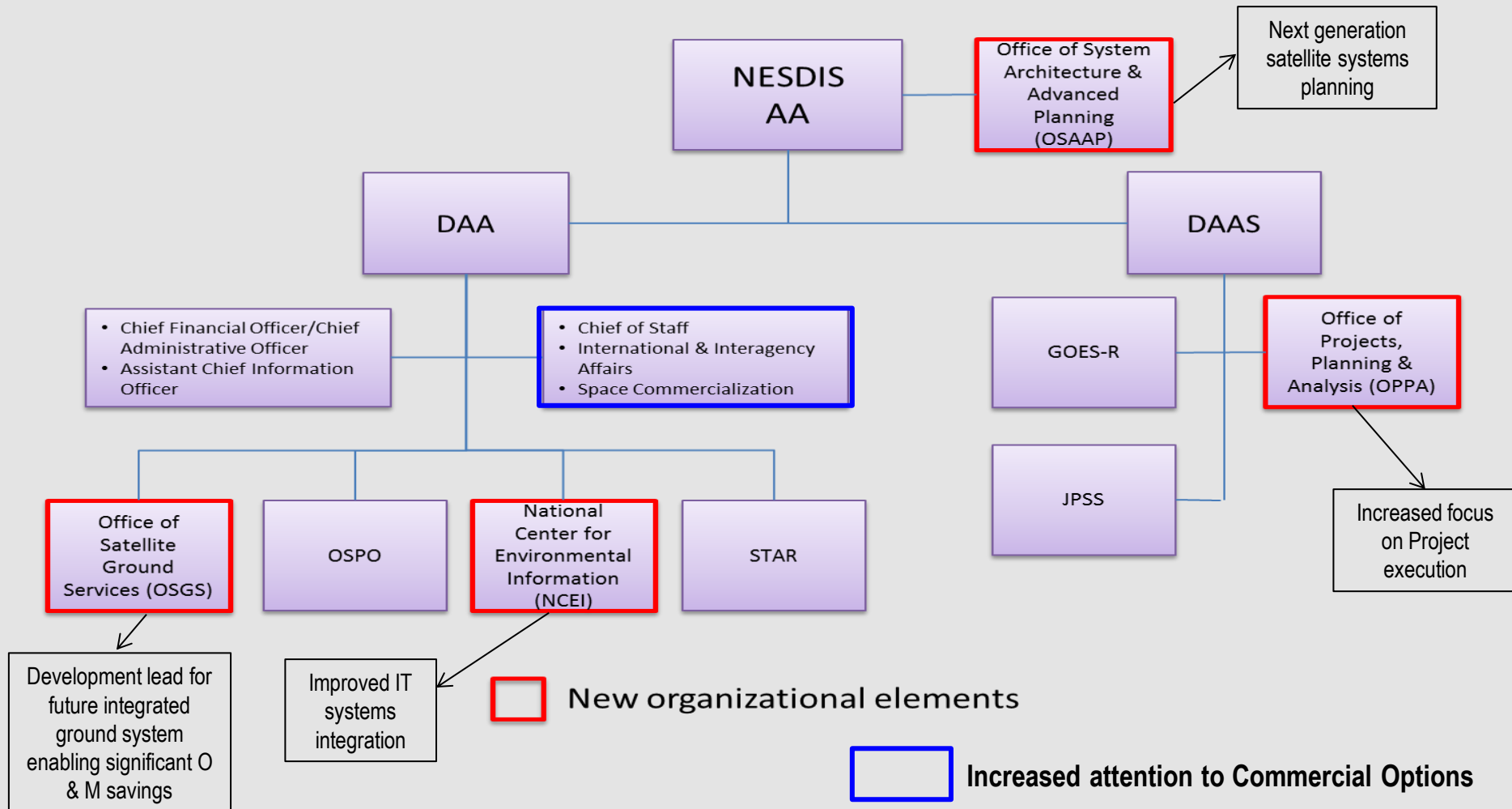


What is ahead?



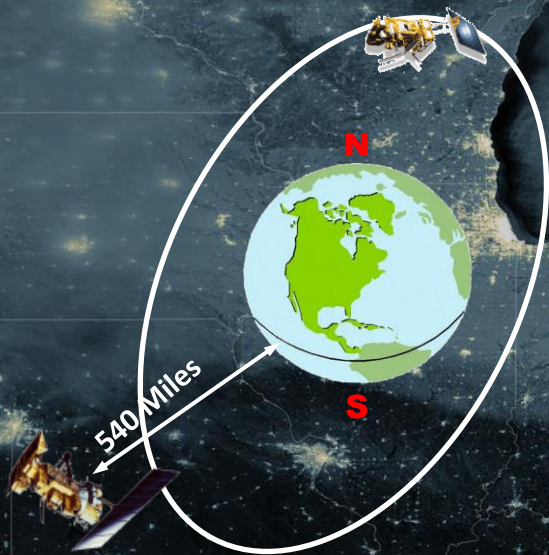


# NESDIS Reorganization Supports A New Way of Doing Business

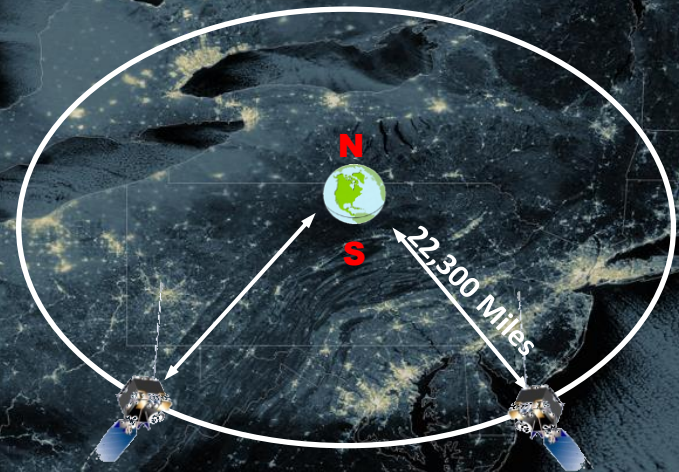


# Future: One Mission, But Beyond Two Orbits

**Polar-orbiting Operational  
Environmental Satellites (POES)  
Followed by S-NPP and JPSS-1 thru -4**



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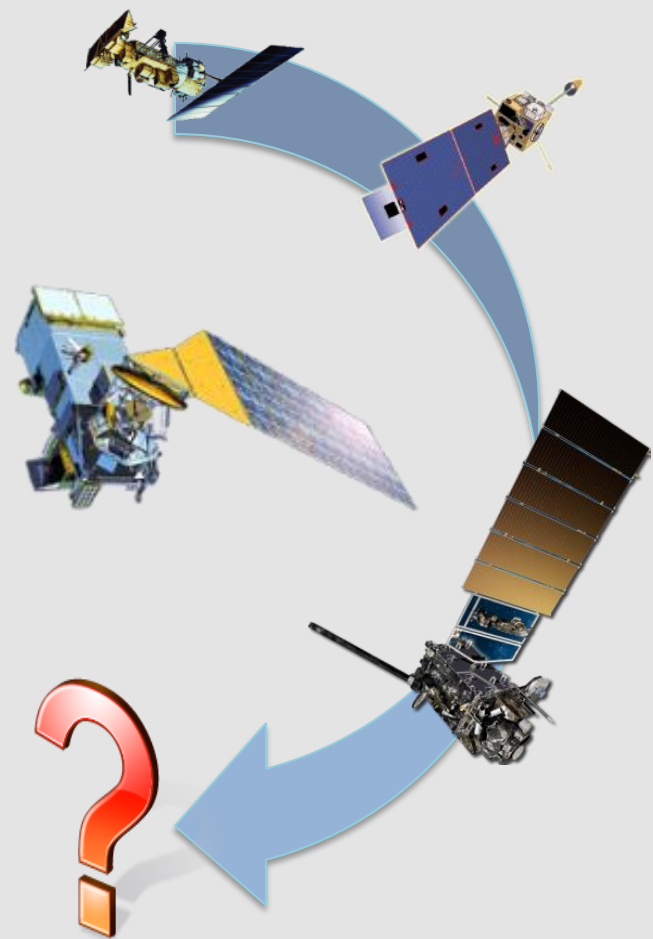


**What will the future look like for NOAA Satellites?**



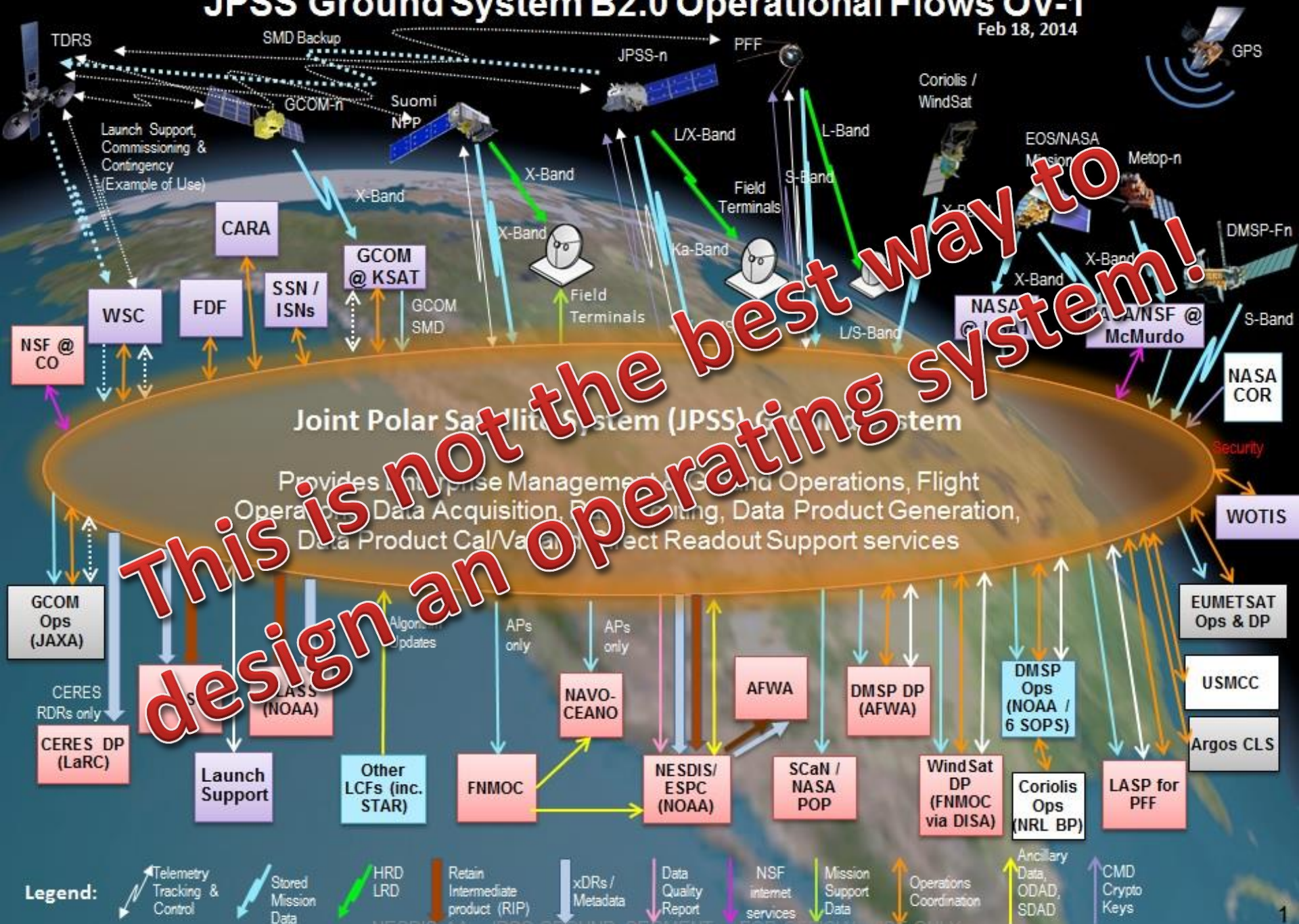
# Beyond Two Orbits

- NOAA is rethinking “polar satellite” LEO perspective...
  - Cosmic-2 RO mission, 1<sup>st</sup> six satellites launching in 2016, 2<sup>nd</sup> six targeted for FY2019
  - Earth Observing Nanosatellite - Microwave (EON-MW) as an alternative microwave sounding approach
- Will be reviewing how we collect GEO in the future, to be more than GOES platforms
  - Will be engaged in analyzing alternative architectures, including hosted payload opportunities
- Increasingly, commercial possibilities may emerge to supply some of NOAA's data needs



# JPSS Ground System B2.0 Operational Flows OV-1

Feb 18, 2014



This is not the best way to design an operating system!



# Enterprise Ground System

## Ground Enterprise Architecture Services (GEARS)

Observatory Management	Defined interfaces to ground systems
Product Management	Generate products
	Publish products
	Collect product information
	Collect processing information
Enterprise Management	Workflow management
	Repository management
	Access service
	Repository management services
Infrastructure	Infrastructure as a Service
Developer and Maintenance Tools Suite	

## Ground Enterprise Value Added

- Greater efficiency and lower costs through common services and logistics
- Improved utilization by sharing resources across all mission needs
- Faster, more economical algorithm and product development and deployment
- Increased interoperability and simpler incorporation of new assets
- More flexible technology insertion
- Requirements-based end-to-end systems engineering for better risk management



# NOAA's Ongoing Commercial Discussions

- NOAA Commercial Space Policy
  - Policy to guide the use of space-based commercial data and services to meet NOAA requirements
  - In review in the Administration, expected release 2015
- NESDIS Commercial Solutions Assessment Process
  - Defines NESDIS process for engaging with the commercial sector to leverage commercial solutions for space-based earth observation requirements
  - Under development, expected release 2015
- NESDIS workshop: April 28, College Park
  - Focus is consideration of commercial data to address NOAA's priority data needs
  - Opportunity to give your input on the NESDIS process of engagement with the commercial sector
  - [http://www.nesdis.noaa.gov/April\\_workshop/](http://www.nesdis.noaa.gov/April_workshop/)





# Commercial Engagement Through RFIs

- RFI on solar wind data released in January 2014
  - Although there is no current service, there continues to be interest and capability in the private sector for providing such data
- RFI for A-DCS/SARSAT hosting opportunity released in August 2014
  - Will be using Air Force HoPS contract to examine LEO hosting opportunities for key instruments
- RFI on GNSS-RO commercial capabilities released in September 2014
  - Goals were to understand the range of options available to purchase commercial radio occultation data and evaluate the current capabilities of potential suppliers
  - NOAA will continue to explore commercial RO solutions in conjunction with existing RO capabilities



# NESDIS Strategic Themes

**Three themes will guide this new way of doing business:**

- 1. Continue to establish a track record for making and meeting our commitments.**
- 2. Advance the NOAA and NESDIS organization as an integrated endeavor**
- 3. Bring the critical management and execution expertise to NESDIS accomplish #1 and #2**



# 2015 Hiring Actions within NOAA NESDIS and NWS



## **NESDIS Hiring:**

- 19 Physical Scientists, to support NCEI, OSPO, Ground Systems,
- 35 Engineers (GS13/14/15) Ground Systems design engineers for our Satellite Ground Services, JPSS and GOES-R, and OPPA

**Go to <https://www.usajobs.gov/> and look for NOAA**

# What's Ahead in 2015

- Keep GOES-R and JPSS on track for launches in 2016 and 2017
- Integrate PFO into the polar program
- Turn DSCOVR over to operations
- Jason-3 (Ocean Surface Topography Mission) launch
- National Academies Decadal Survey kick-off
- Release NOAA Commercial Space Policy and NESDIS Commercial Solutions Assessment Process
- Host workshop as we develop our process for assessing commercial solutions
- Define the NOAA-NASA relationship as proposed in the FY2016 PB







Questions?

